

**WESTERN STATES SEISMIC POLICY COUNCIL  
POLICY RECOMMENDATION 11-5**

**Earthquake Emergency Handbook for  
First Responders and Incident Commanders**

**Policy Recommendation 11-5**

The Western States Seismic Policy Council (WSSPC) recommends that an Earthquake Emergency Handbook for first responders and incident commanders be developed, preferably by an interagency task force.

**Background**

The Fireline Handbook is a valuable tool for first responders and incident commanders dealing with wildfires. The Fireline Handbook was developed by the Incident Operations Standards Working Team, which was sponsored by the United States Department of Agriculture, the United States Department of Interior, the National Association of State Foresters, the United States Fire Administration, and the Intertribal Timber Council. This handy document is used at essentially all major wildfires, and the importance and utility of the handbook is underscored by the variety of organizations that joined together to produce and subsequently adopt it. Among other things, following the handbook can avoid putting fire responders at undo risk and avoid potential injuries because the handbook incorporates the hard won lessons learned and accumulated wisdom from fighting many fires, and compiles that information into an easy and quick to use format.

Most emergency first responders and incident commanders have not experienced an earthquake, and therefore are unfamiliar with the nature of earthquake hazards and how to properly respond to an earthquake emergency and its aftermath. This is because the repeat time between large, damaging earthquakes is relatively long compared to many other natural hazards such as wildfires. Unfortunately, the consequences of an earthquake and related hazards in its aftermath can be catastrophic. The incident commander for the 2008 Wells, Nevada earthquake was unfamiliar with earthquake hazards and had to learn the basics of earthquake emergency response while responding

to the event. He expressed the need for an earthquake emergency guide similar to the Fireline Handbook. Developing an Earthquake Emergency Handbook was also the number one “lesson learned” in the emergency response section of the Wells earthquake disaster review (dePolo and LaPointe, 2011).

### **Facilitation and Communication**

WSSPC encourages the Federal Emergency Management Agency of the U.S. Department of Homeland Security to take the lead, in cooperation with relevant Federal, state, and local agencies and private industry, in developing a comprehensive Earthquake Emergency Handbook. The handbook should then be rapidly distributed to potential first responders and incident commanders in earthquake-prone states.

The document should alert first responders and incident commanders to issues specific to damaging earthquakes, and to issues that arise during the emergency response following an earthquake, including:

- Seismic safety considerations for Incident Command Centers, Emergency Operating Centers, and emergency shelters;
- Scoping earthquake damage and gaining situational awareness – earthquakes typically have a unique damage profile with the worst damage (often very widespread) occurring at the beginning of the event followed by sometimes strong and damaging aftershocks;
- Deploying teams with appropriate training and strategies to safely reconnoiter for earthquake-affected individuals and to rapidly assess building safety;
- Guidance for the size of aftershocks that would trigger re-inspection of buildings for safety;

- Important resources, such as earthquake response plans, and contact information for building inspectors, earthquake scientists, and community leaders;
- Communicating and properly qualifying/quantifying issues during earthquake emergencies between responders, responding agencies, and the affected public;
- Guidelines for establishing safety perimeters and barricades following an earthquake, to protect people from building collapse, parapet or chimney collapse, etc. during an aftershock; and
- Collateral damage considerations such as inspecting dams, canals, bridges, over/under passes, communication links, radio repeaters, cell tower sites, hazardous material storage sites, and other infrastructure that if damaged can inhibit emergency response or cause greater damage.

WSSPC members can help review the handbook and encourage its distribution and use in earthquake-prone areas.

### **Assessment**

Measures of the success of this policy recommendation will be: 1) the development of an Earthquake Emergency Handbook, and 2) the distribution of the handbook to first responders and incident commanders in areas at risk from a damaging earthquake. Following the use of the handbook in an earthquake response, an evaluation should be made regarding the effectiveness of the handbook to determine what should be added, and what can be improved. The handbook should be widely available, possibly on the WSSPC website, so new first responders to earthquake emergencies and incident commanders will know of its availability and how to obtain it.

Key insights and experienced approaches to earthquake emergency response can ultimately save the lives of responders and the affected public, so it is with a sense of urgency that the Earthquake Emergency Handbook is requested to be developed.

## **References**

dePolo, C.M. and LaPointe, D.D., editors, The 21 February 2008 Mw 6.0 Wells, Nevada earthquake - A compendium of earthquake-related investigations prepared by the University of Nevada, Reno: Nevada Bureau of Mines and Geology Special Publication 36, variously paginated. (<http://www.nbmg.unr.edu/Pubs/sp/sp36>)

Incident Operations Standards Working Team, 2004, NWCG Fireline Handbook: National Wildfire Coordinating Group Handbook 3, variously paginated. (<http://www.nwcg.gov/pms/pubs/410-1/410-1.pdf>)

## **History**

Policy Recommendation 11-5 was unanimously adopted by email vote of the WSSPC members June 30, 2011.